MP2E

Integrated AV Control System with Ethernet

Crestron's MediaManager is a comprehensive family of affordable products fusing high-performance AV signal distribution, device control, and facility-wide system management. MediaManager simplifies the art of ProAV system design and installation with complete hardware, software, and low-cost wiring solutions.

The MP2E combines an Ethernet control system and audio/video switcher in a single box to provide a cost-effective total room control solution. Easily configured with Crestron **SystemBuilder™** software, the MP2E is all that is needed to select and control all of the room's AV and environmental resources including VCRs, DVD/CD players, projectors, screens, lighting and more. With a unique combination of high-performance features and performance at an affordable price, the MP2E is the ideal AV control solution for college campuses, corporate meeting and training centers, and other multi-room facilities.

4x2 Video Switcher

The high-bandwidth 4x2 video crosspoint switcher distributes video from four composite sources to two destinations—great for displaying one source on a plasma display while previewing another on a Crestron touchpanel. Alternatively, the switcher may be configured as a 2X1 S-Video switcher. Built-in video-sensing on each input can be used to provide device power status information to the control system, and to detect signal presence for auto-switching.

The video routing capabilities of the MP2E can be extended by adding the **C2N-MMS** S-Video/RGBHV matrix switcher.

7x1 Audio Switcher/Processor

The 7x1 audio switcher provides balanced and unbalanced inputs for seven stereo audio sources. Built-in volume, bass, treble and mute controls and a 6-band graphic/parametric equalizer allow for precise adjustment and complete control of the audio signal. All audio settings and presets may be recalled and controlled from a Crestron touchpanel, keypad or other user interface. Crestron's Digital Media Tools (DMT) software provides the installer with a simple utility for setting input levels and equalization settings.

2-Series Engine

At the heart of the MP2E is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the MP2E the fastest, most reliable control system available. The MP2E features two built-in COM ports, four IR/Serial ports, four I/O Versiports, and four isolated relays, and supports Crestron's full range of touchpanels, keypads, and Cresnet peripherals.

Cresnet®

Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication for numerous Cresnet devices.

Cresnet Slave Mode

Selectable Cresnet Slave Mode enables the MP2E to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

Ethernet

Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet for remote control, monitoring, programming, and diagnostics. The MP2E is designed to deliver the world's most advanced IP control solution with full-duplex 10/100 Ethernet, built-in Web server and email client, and support for both static and dynamic IP addressing.

e-Control®2

Crestron's award-winning **e-Control 2** XPanel solutions offer the most flexible range of IP control possibilities available. Using a Windows® computer or CE/PocketPC™ PDA device, e-Control 2 provides an amazing control GUI that looks and behaves just like a Crestron Isys® touchpanel.

RoomView®

Every Ethernet-enabled 2-Series control system works directly with Crestron's exclusive **RoomView** Help Desk software for the industry's most comprehensive facility-wide asset management solution.

SNMP

Built-in SNMP support enables network management of Crestron control systems using third-party SNMP software. As an alternate or supplement to RoomView, SNMP allows full control and monitoring from the IT Help Desk or
NOC in a format that's familiar to IT personnel.

SSL

All Ethernet-enabled 2-Series control systems support SSL (Secure Sockets Layer), the industry standard for protecting sensitive network communications.

IR Wireless Option

When equipped with an optional **CNXRMIRD** IR receiver, the MP2E provides a low-cost wireless control solution using any of Crestron's IR wireless touchpanels, or a third-party universal IR remote.

> 2-Series engine | Dual-bus architecture

> Integrated AV Switcher/Processor

> Cresnet port - master/slave selectable

> 10/100 Ethernet | SSL encryption

MP2E Integrated AV Control System with Ethernet

> e-Control 2 and RoomView enabled | SNMP support

> 2 Com ports (RS-232/422/485)

> 4 IR/serial ports

> 4 Versiport I/O ports

> 4 Low-voltage relay ports

> IR wireless compatible using CNXRMIRD

> Complete setup in minutes using MP2 Wizard Software

> External power supply included

> Single-space EIA rack-mountable

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB
NVRAM: 256 KB
Flash: 4 MB

Operating System

Real-time, preemptive, multitasking kernel, multi-threaded; FAT32 file system with long names; supports **SIMPL™ Windows®** and **SIMPL+®**

Ethernet

10/100BaseT, static IP or DHCP/DNS, SSL, auto-negotiating, full duplex TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron **e-Control®2 XPanel** and **RoomView®** applications

Video

Switcher: 4x2 composite matrix switcher or 2x1 Y/C (S-Video) switcher
Bandwidth: 100MHz minimum
Crosstalk: -60dB

Audio

Features: 7x1 stereo audio switcher, digital parametric and/or graphic equalizer
Master Volume: -80dB to +20dB, 1dB steps
Input Compensation: ±10dB, 0.1dB steps from DMT, 0.2dB steps from SIMPL
Bass Gain Range: ±15dB @ 100Hz, 0.5dB steps
Treble Gain Range: ±15dB @ 10kHz, 0.5dB steps
Equalization Modes: 6-band parametric;
3-band graphic + 3-band parametric;
5-band graphic + 1-band parametric;
5-band graphic + 1-band parametric (speech-optimized)
PEQ Filter Gain: ±12dB, 0.01dB steps from DMT; +24/-36dB, 0.1dB steps from SIMPL
PEQ Filter Bandwidth: 0.02 to 2.0 octaves (1.0 to 3.0 for shelving) from DMT, 0.02 to 3.5 octaves from SIMPL, 0.01 octave steps
PEQ Filter Center Frequency: 25Hz to 19.9kHz from DMT; 5Hz to 24KHz from SIMPL, 1Hz steps
PEQ Filter Types: low pass, high pass, EQ filter (peaking/notching), bass shelf, and treble shelf
GEQ Filter Gain: ±12dB from DMT, ±10dB from SIMPL, 0.1dB steps
GEQ Filter Center Frequencies: 63Hz, 250Hz, 1kHz, 4kHz, 10kHz (5-band);
160Hz, 600Hz, 1kHz, 2.5kHz, 5kHz (5-band speech);
250Hz, 1kHz, 4kHz (3-band)
Frequency Response: 20Hz to 20kHz +0/-0.5 dB
THD+N: <0.005% at 1kHz, A-weighted, maximum input/output
S/N Ratio: >97 dB, 20Hz to 20kHz A-weighted
Channel Separation: >100dB at 1kHz;
90dB 20Hz to 20kHz
Crosstalk: > -90dB 20Hz to 20kHz
Common Mode Rejection: >85dB 20Hz to 20kHz

Connectors - Video

VIDEO IN 1 - 4: (4) BNC female comprising (4) composite or (2) S-Video inputs;
Input Impedance: 75 ohms;
Discrete video sensing on each input
VIDEO OUT 1 - 2: (2) BNC female comprising (2) composite or (1) S-Video outputs;
Output Impedance: 75 ohm

Connectors - Audio

AUDIO IN 1 - 2: (2) 5-pin 3.5mm detachable terminal blocks comprising (2) balanced/unbalanced stereo line-level inputs;
Input Impedance: 15k ohms balanced, 10k ohms unbalanced;
Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced
AUDIO IN 3 - 7: (5) 3-pin 3.5mm detachable terminal blocks comprising (5) unbalanced stereo line-level inputs;
Input Impedance: 10k ohms;
Maximum Input Level: 2 Vrms
AUDIO OUT L/R: (1) 5-pin 3.5mm detachable terminal block;
Balanced/unbalanced stereo line-level output;
Output Impedance: 200 ohms balanced, 100 ohms unbalanced;
Maximum Output Level: 3.6 Vrms balanced, 1.8 Vrms unbalanced

Connectors - Control & Power

COM A - B : (2) DB9 male, bidirectional RS-232/422/485 ports;
Up to 115.2k baud;
Hardware and software handshaking support;
All ports support **C2N-NPA8** Network Poll Accelerator
IR SERIAL OUT A - D : (4) 2-pin 3.5mm detachable terminal blocks;
IR/Serial output ports;
IR output up to 1.2 MHz;
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud;
Individual signal generator per port, allowing simultaneous firing of all ports
I/O Versiports 1 - 4 : (1) 5-pin 3.5mm detachable terminal block comprising (4) digital input/output or analog input ports (referenced to GND);
Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;
Digital Output: 250mA sink from maximum 24 Volts DC, catch diodes for use with “real world” loads;
Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;
Programmable 5 Volts, 2k ohms pull-up resistor per pin
RELAY OUTPUT 1 - 4 : (1) 8-pin 3.5mm detachable terminal block comprising (4) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC;
MOV arc suppression across contacts

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IR IN: (1) 3-pin 3.5mm detachable terminal block;
For connection of the **CNXRMIRD** IR Receiver (sold separately);
Allows IR wireless control from Crestron or third-party remotes using RC-5 IR commands
LAN: (1) 8-wire RJ45 with 2 LED indicators;
10/100BaseT Ethernet port;
Green LED indicates link status;
Yellow LED indicates Ethernet activity
COMPUTER: (1) DB9 female,RS-232 computer console port
NET: (1) 4-pin 3.5mm detachable terminal block;
Cresnet port, Master/Slave selectable;
Expandable via **C2N-NPA8** Network Poll Accelerator
24VDC: (1) 2.1mm barrel DC power jack, 24 Volt DC power input
(**PW-2410RU** power supply included)
Passes through to NET port to power Cresnet devices
Ground: (1) 6-32 screw, chassis ground lug

Reset Buttons

HW-R: Hardware reset (reboots the control system)
SW-R: Software reset (restarts the SIMPL program)

LED Indicators

PWR: (1 green) Indicates DC power supplied to unit
NET: (1 yellow) Indicates Cresnet bus activity
MSG: (1 red) Indicates control system has generated an error message
LNK: (1 red) Indicates a valid connection on LAN port
ACT: (1 red) Indicates activity on LAN port

Power Requirements

18 Watts (0.75 Amp) @ 24 Volts DC (**PW-2410RU** power supply included)
Available Cresnet Power: 7 Watts using **PW-2410RU** (included), or 30 Watts using **PW-2420RU** (sold separately)
Cresnet Power Usage: 18 Watts (0.75 Amp @ 24 Volts DC) with no power supply connected to the 24VDC connector

Environmental

Temperature: 41° to 113°F (5° to 45°C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

Chassis: Steel, black matte powder coat finish
Faceplate: Extruded aluminum, black matte powder coat finish with polycarbonate label overlay
Mounting: Freestanding or 1U 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 1.70 in (4.32 cm)
Width: 17.03 in (43.25 cm);
19.0 in (48.26 cm) with ears
Depth: 9.08 in (23.06 cm)

Weight

3.54 lbs (1.61 kg)

Available Models

MP2E: Integrated AV Control System with Ethernet

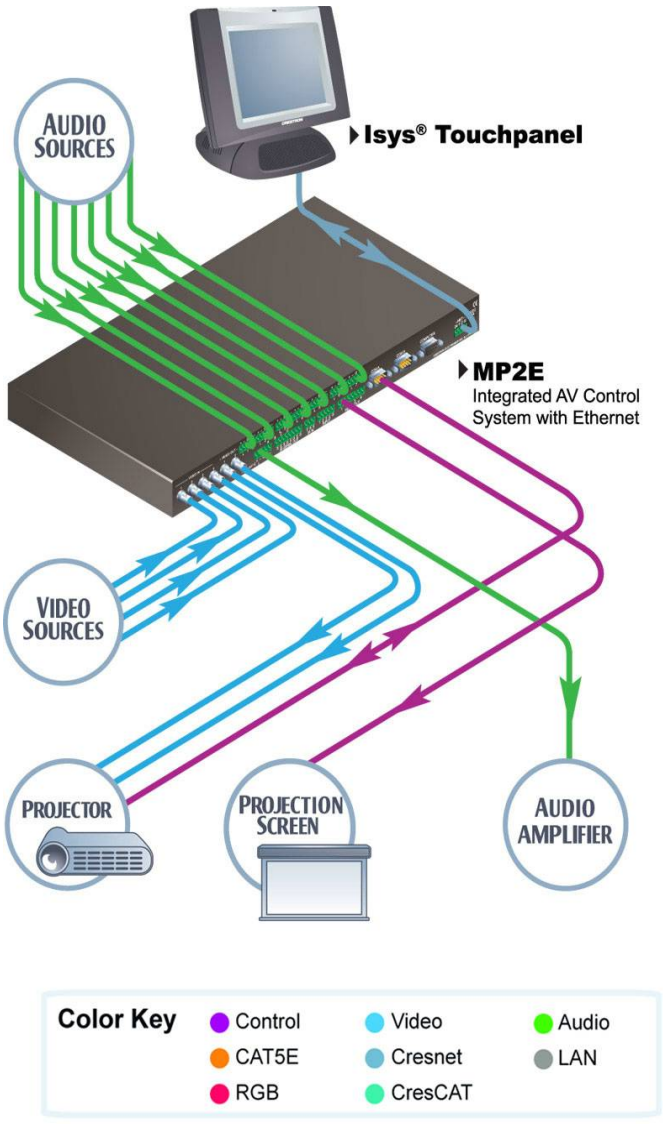
Included Accessories

PW-2410RU Power Pack, Desktop, 24VDC, 1A (25 Watts), Regulated, US/International
[Included Quantity: 1]

Available Accessories

C2N-HBLOCK: Multi-type Cresnet Distribution Block
C2N-MMS: Video/RGB Switcher
CNSP-XX: Custom Serial Interface Cable
CNXRMIRD: IR Receiver
IRP2: IR Emitter Probe
PW-2420RU: Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/International

Typical MP2E Application



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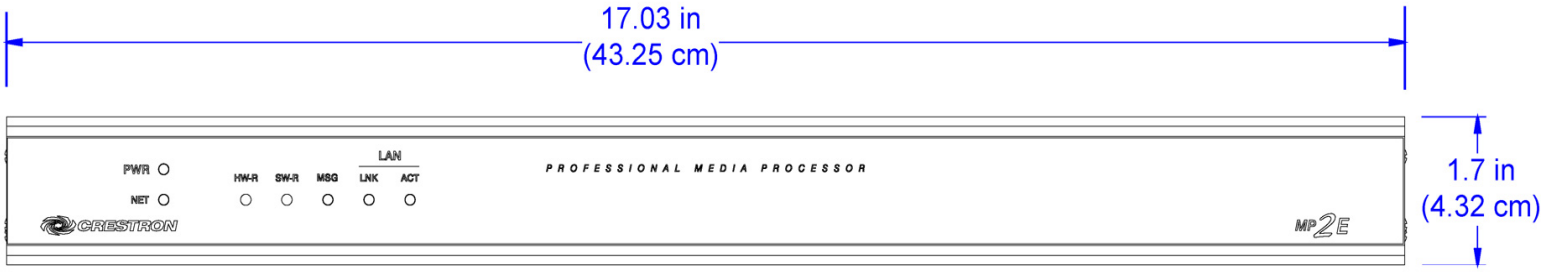
MP2E Integrated AV Control System with Ethernet

Front



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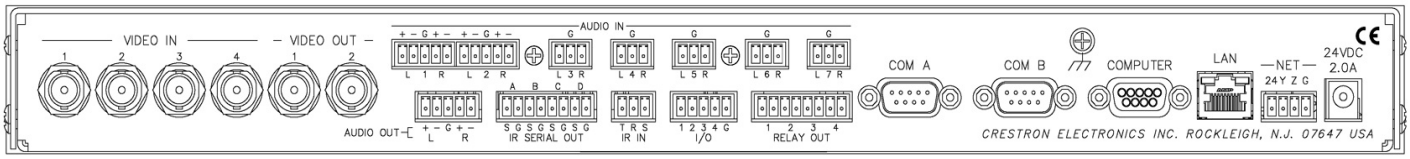

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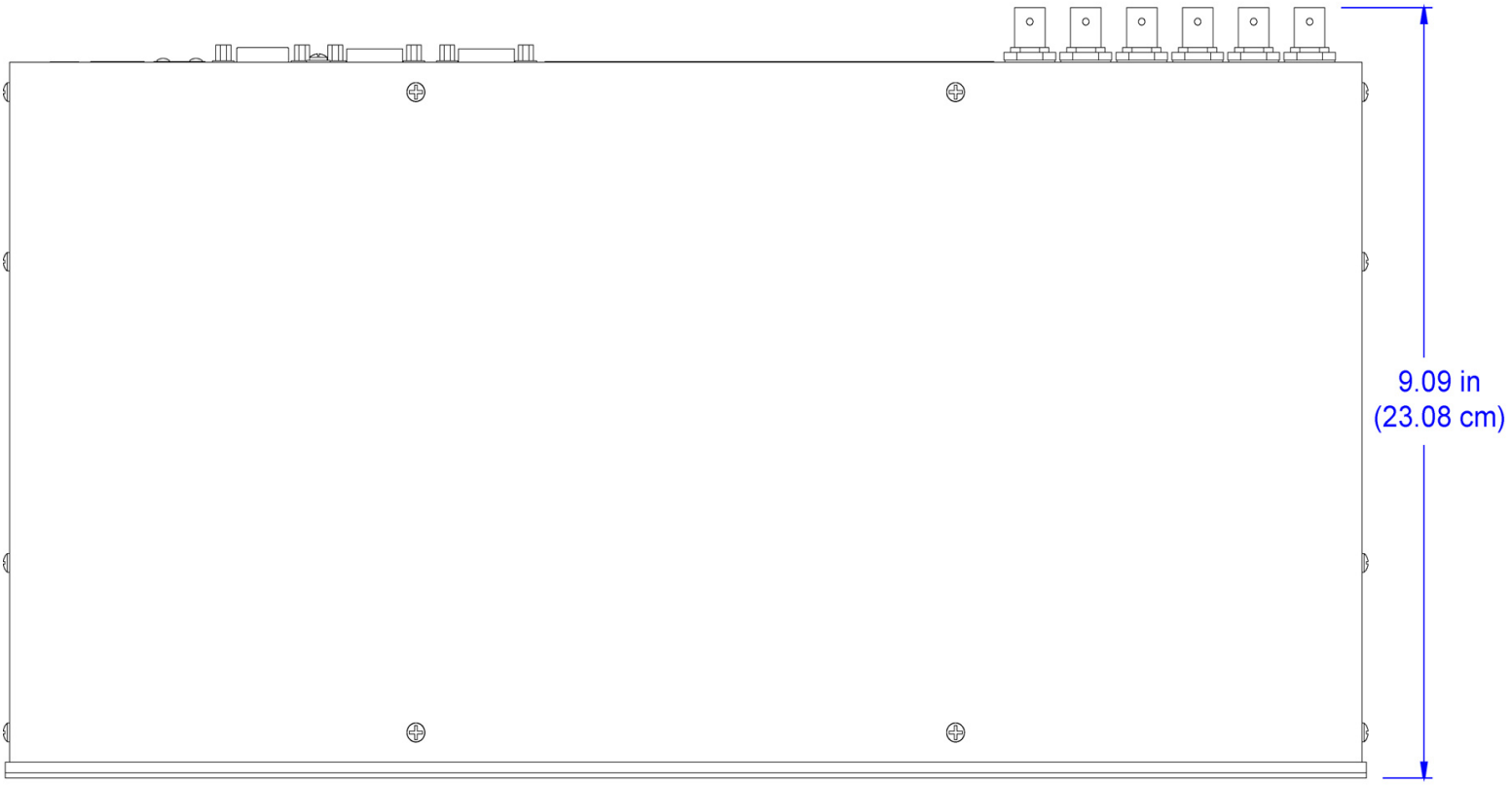

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